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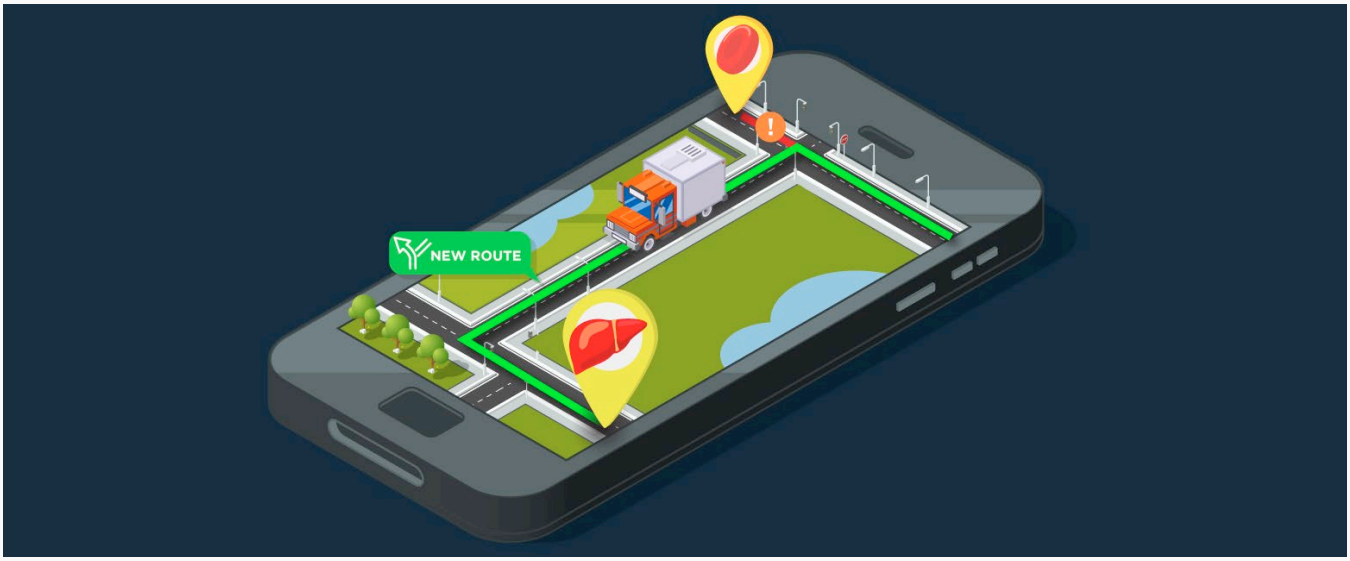

BIOCENTURY & GETTY IMAGES

PRODUCT DEVELOPMENT

Anokion puts liver to the test

BY ALLISON JOHNSON, SENIOR WRITER

Data presented Sept. 13 at a major multiple sclerosis meeting showcased the ability of Anokion's liver targeting technology to induce immune tolerance.

Armed with a fresh $40 million series B round, Anokion S.A. is developing a platform to treat autoimmune disease by inducing tolerance via liver-targeted autoantigens (see "Anokion's autoimmunity platform evolution").

The company presented data at European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) meeting in Stockholm showing the effects of LT-MOG on T cell activity and disease control in the experimental autoimmune encephalitis (EAE) mouse model of multiple sclerosis (MS). LT-MOG comprises an MS autoantigen, MOG, conjugated to a liver-targeted glycosylation signature specific to an undisclosed liver receptor involved in immune tolerance induction.

In the mouse model of MS, LT-MOG decreased the percent of MOG-reactive CD4+ T cells in the spleen and shifted their phenotype from active and inflammatory to exhausted and anti-inflammatory, based on protein expression changes compared with vehicle control (CD4+ T cells: $p<0.001$).

LT-MOG also completely prevented disease development when given prior to the appearance of symptoms, whereas MOG without the liver targeting moiety or saline did not prevent disease initiation, and a mAb against the integrin VLA-4 delayed onset but did not prevent it.

In addition, LT-MOG induced remission in mice when given after disease symptoms appeared, a treatment paradigm more consistent with clinical practice. Anokion tested two regimens: each consisted of three doses given every three days — one began a day after symptoms appeared, the second began three days after.

When administered one day following symptom appearance, the EAE disease score never rose above 1, and remained at 0 from day 10-17. Under this scoring system, 0 means no detectable MS-like symptoms and 4 means weakness or paralysis in arms and legs.

In contrast, the disease score of saline-treated animals peaked at 3, ending at 2 on day 17, as did the VLA4 mAb-treated animals, though symptoms did not appear in those animals until day 13.

In the LT-MOG regimen that began three days after symptom appearance, disease severity peaked at 2 and improved to 1 by day 17.

Biogen Inc. (NASDAQ:BIIB) markets anti-VLA-4 mAb Tysabri natalizumab to treat MS. VLA-4 is expressed by inflammatory immune cells and helps them traffic to sites of inflammation, meaning that blocking it with an antibody acts as an immunosuppressant.

Anokion COO Deborah Geraghty declined to confirm whether MOG was one of several antigens that comprises ANK-780, the company's MS therapy that will begin clinical testing next year.

TARGETS

MOG - Myelin oligodendrocyte glycoprotein
VLA-4 (CD49D) - Integrin alpha(4)

BIOCENTURY INC.

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